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Cont'd

bearing, a spring-strut support bearing, a shock-absorber bearing, and a bearing for triangular links.

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Please cancel claims 27 and 28.

REMARKS

Claims 1, 19, 20, 22-24, and 29 remain in the application with claims 1 and 19 in independent form. Claims 1 and 19 have been amended and claims 9, 14, 27, and 28 have been cancelled.

Claims 1, 9, 14, 19, 20, 22-24, and 27-29 stand rejected under 35 U.S.C. §103 as being unpatentable over Zeitler et al. (United States Patent Number 5,288,549) in view of Krech et al. (United States Patent Number 6,063,824) and Unchida et al. (United States Patent Number 5,061,778).

The Examiner states that Zeitler is directed toward a composite element used to form dashboards having a top layer A and a base layer B and that the base layer B reads on the molding of the subject invention. The Examiner further states that Krech teaches a microcellular polyurethane elastomer useful in shock and vibration damping systems in the automobile sector and relies on Unchida for the motivation to make dashboards out of noise and vibration damping materials. Accordingly, the Examiner concludes that because Zeitler is directed to the production of dashboards, it would be obvious to use a microcellular elastic polyurethane material, as disclosed in Krech, as the top layer A in the composite element of

Zeitler, motivated by the desire to make a dashboard with improved damping properties and excellent volume compressibility. The Examiner believes the claims do not call out specific structural elements and thus suggests the dashboard of Zeitler is a damping element.

Rejection of a claim under 35 U.S.C. § 103(a) based on a combination of references requires that there be some teaching or motivation found within the references themselves that would lead one of ordinary skill in the art to combine the references and, furthermore, that once combined the references must either disclose each and every limitation of the claim or make obvious any such limitations not disclosed. Absent a teaching or motivation within the references themselves for combining the references is improper for the Examiner to combine the references. *In re: Sang Su Lee*, 277 F.3d 1338 (Fed. Cir. 2002), citing *Brown & Williamson Tobacco Corp. v. Phillip Morris, Inc.*, 229 F.3d 1120, 1124-25 (Fed. Cir. 2000).

Independent claims 1 and 19 have been amended to require that the composite element be adapted to be received in one of a transverse link bearing, a rear-axle subframe bearing, a stabilizer bearing, a longitudinal link bearing, a spring-strut support bearing, a shock-absorber bearing, and a bearing for triangular links. As set forth in the Manual for Patent Examining Procedure (MPEP) §2173.05(g), a functional limitation must be evaluated and considered, just like any other limitation of the claim, for what it fairly conveys to a person of ordinary skill in the pertinent art in the context in which it is used. The present amendments do not just cite a use for the damping element, they are functional limitations on the composite damping element. The composite damping element of the subject invention forms a part of one of a transverse link bearing, a rear-axle subframe bearing, a stabilizer bearing, a longitudinal link bearing, a spring-strut support bearing, a shock-absorber bearing, and a bearing for triangular links. More

specifically, the composite damping element replaces the rubber-metal composites that are used in these specific automotive damping devices. The microcellular layer replaces the rubber portion of the prior art and the molding replaces the metal element of the prior art. The molding allows for attachment of the composite damping element to these various damping devices.

Zeitler is directed towards use of the composite element in dashboards that are not to be continuously and repeatedly compressed. The composite element dashboard is located in the interior of the passenger compartment. The cellular polyurethane acts as a noise damping element to reduce noise from the engine and as a cushioning element in the rare instance when a force is exerted against the surface of the dashboard. The molding, or skin, in Zeitler improves the dashboards aesthetic properties and encloses the cellular polyurethane to conceal it from the occupant. The skin is not used to allow the dashboard to be attached in the interior of the passenger compartment.

Whereas, in Krech et al., the microcellular polyurethane elastomers are used as damping elements in the vibration and shock damping systems. The damping element is to be compressed repeatedly without losing any of the damping properties and can be used to replace rubber elements in shock damping systems. Krech et al. however provides no disclosure of a thermoplastic molding being attached to the elastomer as in the subject invention. The thermoplastic molding allows the subject invention to replace rubber metal components of the prior art.

In order to improve the usefulness of the damping element, the subject invention is a composite damping element having both the molding and the microcellular layer. The molding serves to attach the elastomer damping element into one of a transverse link bearing, a rear-axle

subframe bearing, a stabilizer bearing, a longitudinal link bearing, a spring-strut support bearing, a shock-absorber bearing, and a bearing for triangular links. It would not be obvious to combine a base layer of an interior dashboard with an element in a shock or vibration damping system. The type of noise and vibration being dampened by the dashboard is not the equivalent type of shock and vibration being dampened by the subject invention and the base layer in the dashboard does not serve the purpose of the molding in the subject invention.


Therefore, there is no motivation to combine these references. The dashboard is directed to preventing engine noise from being heard by the occupants and serves as a secondary cushioning element, if necessary. The microcellular damping element is continuously and repeatedly compressed in a shock or vibration damping system. Noise and vibration damping is not equivalent to shock and vibration damping, nor is it an obvious variation. One skilled in the art of shock and vibration damping systems for the running gear of an engine would not look to interior dashboard systems. They serve different and non-obvious purposes than the subject invention. Accordingly, the 35 U.S.C. §103 rejection is believed to be overcome. Further, dependent claims 20, 22-24, which depend from claim 19, and dependent claim 29, which depends from independent claim 1, and are also believed to be allowable.

Applicants' attorney respectfully submits that the claims as amended are now in condition for allowance and respectfully requests such allowance.

Respectfully submitted,

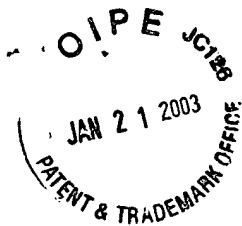
HOWARD & HOWARD ATTORNEYS

January 14, 2003
Date

A handwritten signature in black ink, appearing to read "Randall L. Shoemaker", is written over a horizontal line.

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Irene M. Brown

MARKED UP VERSION OF CLAIMS

1. (Fourthly Amended) A [C]composite damping element capable of replacing rubber-metal damping composites, said composite damping element comprising:

(i) a molding comprising thermoplastic polyurethanes and having a thickness of from 2 to 10 mm, wherein said molding comprises the reaction product of (a) isocyanates with (b) isocyanate reactive compounds in a ratio of isocyanate groups in (a) to isocyanate reactive groups in (b) of greater than 1.06:1, said molding bonded to

(ii) a second layer comprising microcellular polyurethane elastomers having a density of from 300 to 700 kg/m³, a tensile strength to DIN 53571 of from 3 to 8 N/mm², an elongation at break to DIN 53571 of from 350 to 550%, a tear propagation resistance to DIN 53515 of from 8 to 30 N/mm, and a rebound resilience to DIN 53512 of from 50 to 60% [, wherein said molding comprises the reaction product of (a) isocyanates with (b) isocyanate reactive compounds, where the ratio of isocyanate groups in (a) to isocyanate reactive groups in (b) is greater than 1.06:1.]

wherein said composite damping element is adapted to be received in one of a transverse link bearing, a rear-axle subframe bearing, a stabilizer bearing, a longitudinal link bearing, a spring-strut support bearing, a shock-absorber bearing, and a bearing for triangular links.

19. (Twice Amended) A composite damping element capable of replacing rubber-metal damping composites, said composite damping element comprising:

- i) a thermoplastic polyurethane molding having a thickness of from 2 to 10 mm, and
- ii) a microcellular polyurethane elastomer layer bonded to at least one surface of said molding,

wherein said composite damping element is adapted to be received in one of a transverse link bearing, a rear-axle subframe bearing, a stabilizer bearing, a longitudinal link bearing, a spring-strut support bearing, a shock-absorber bearing, and a bearing for triangular links.